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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,434	06/05/2001	Yining Deng	10006290-1	7733

7590 04/27/2006

HEWLETT-PACKARD COMPANY
Intellectual Property Admiinistration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
COUGHLAN, PETER D	

ART UNIT	PAPER NUMBER
2129	

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/875,434	DENG ET AL.	
	Examiner	Art Unit	
	Peter Coughlan	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/17/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1. This office action is in response to an AMENDMENT entered February 14, 2005 for the patent application 09/875434 filed on June 5, 2001.

2. The First Office Action of November 14, 2005 is fully incorporated into this Final Office Action by reference.

Status of Claims

3 Claims 1-13 are pending.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable in view of Manjunath & Deng and further in view of Manjunath & Ma ('Issues for Image/Video Digital Libraries', referred to as **MD**; 'Texture Features for Browsing and Retrieval of Image Data', referred to as **MM**)

Claim 1.

MD teaches (a) a task component configured to perform a plurality of classification tasks arranged in an established sequential progression of decision making (**MD**, p595, C2:10-11; Examiner's Note (EN) The first stage, segmentation search is the first of a plurality of classification tasks. This is the first part of a system decision system software.), said established sequential progression of decision making including a plurality of classification nodes for assigning class labels to an individual image file of said image files of non-textual subject data such that said class labels are available for matching a query when a search for said individual image file is subsequently conducted **(MD,** p595, C2:29 through p596, C1:10; EN 'Class labels' of applicant is equivalent to 'codeword' and corresponding 'icon representation' of MD.), at least some of said classification nodes including algorithms for determining which of a plurality of alternative next classification nodes is to be encountered in said sequential progression of decision making (**MD**, p595, C2:41-43; EN In this reference, a query pattern request will be used to find a match. This illustrates a plurality of next classification nodes to go to. **MD** p596 C1:11 to C2:14; MD uses a neural network along

with a vector quantization scheme to develop an hierarchical indexing which is equivalent to determining the next classification node of applicant.);

MD teaches (b) an algorithmic component having access to a storage of available algorithms for execution at said classification nodes, said algorithmic component being common to said classification nodes and being accessed by each said classification node for selecting a specific algorithm for each of said classification tasks (**MD**, p395 C2:44 through p596. C1:6; **EN** Here the 'access to a storage of available algorithms' of applicant is equivalent to 'visual thesaurus' of MD. The various levels of hierarchy of MD is equivalent to 'classification nodes being accessed by each said classification nodes' of applicant.), said specific algorithm being configured to execute at least one of content-based analysis for processing content-based data (**MD**, p596, C1:11 through p596, C2:5)

MD does not teach meta-data analysis for processing meta-data.

MM teaches meta-data analysis for processing meta-data (**MM**, p841, C1:18-20 If pre analysis use of meta data is desired then **MD** p596 C2:37 through p597 C1:3 describes using an interface with icons that represent meta-data for queries.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the method of determination of classification of MD with meta-data analysis for processing meta-data by MM. Having information about the non-textual file besides the content of the file itself is needed as well for classification purposes.

MD teaches for at least some of said classification nodes said algorithmic component is configured to select among alternative stored algorithms that are specific

to determining assignment of a same said class label (**MD**, p596, C2:28-31; EN After the image is segmented into regions by the first algorithm, alternative algorithms such as color, shape texture and location are possible used),said algorithmic component being further configured to use prior determinations at said classification nodes as a basis for selecting among said alternative stored algorithms specific to determining assignment of said same class label (**MD**, p597, C1:16 through C2:4; EN the 'prior determinations' of applicant is equivalent to 'sub-objects' in number of video frames in sequence.);

MD teaches (c) a sub-algorithmic component for selecting at least one sub-algorithmic routine for said specific algorithm having a plurality of sub-algorithm routines, said at least one sub-algorithmic routine being selected based on said selecting said algorithm (**MD**, p597, C2:5-16; EN Sub-object information is now generated and using that, sub-algorithms of spatial and temporal relations are now used.); and

MD teaches (d) a learning component for modifying said arrangement of classification tasks according to determinations of frequency patterns In the common assignments of said .class labels to individual said image files of non-textual subject data(**MD**, p596, C2:5-9; EN A hybrid neural network is a design that learns from exposure to frequency of patterns).

Claim 2.

MD teaches a system web-service module for providing Internet access to said system decision module (**MD**, p596 C2:41 through p597 C1:2).

Claim 3.

MD teaches a system interface module for providing communications among a plurality of system and nonsystem modules, wherein one of said system modules Is said system decision module (**MD**, p596, C2:37-41).

Claim 4.

MD teaches non-system modules includes at least one said sub-algorithmic routine (**MD**, p597, C1:5-7; EN Non-system modules such as object tracking scheme would have working algorithm(s) to make them functional.

Claim Rejections - 35 USC § 103

5. Claims 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of MD, and MM, as set forth above, and further in view of Kadtke (U. S. Patent 6278961, referred to as **Kadtke**).

Claim 5.

MD and MM do not teach the system interface module further includes data components for storing data associated with classifying a plurality of said image files of

said non-textual subject data and at least one control component for executing said sub-algorithmic routines.

Kadtke teaches the system wherein said system interface module (**Kadtke**, Figure 2; EN The 'system interface' of applicant enables communication between modules. In Figure 3, you can see the communication between modules 201, 202, 203, 204 and 205 of Kadtke.) further includes data components for storing data associated with classifying a plurality of said image files of said non-textual subject data (**Kadtke**, C2:44-47; EN The 'storing data' of applicant is equivalent to 'build and modify a database of features' of Kadtke.) and at least one control component for executing said sub-algorithmic routines (**Kadtke**, Figure 1; EN Kadtke shows in control component 105, has three different sub-algorithms to choose from.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD and MM with the system wherein said system interface module further includes data components for storing data associated with classifying a plurality of said image files of said non-textual subject data and at least one control component for executing said sub-algorithmic routines by Kadtke. This allows for ease of communication of new modules if added and little effect if removed, having a storage facility with images and associated classification for ease of retrieval, and easing system design by having multiple sub-algorithms associated to a single node.

Claim 7.

MD and MM do not teach the learning component is configured to identify an algorithm for each of said classification tasks and at least one sub-algorithmic routine for said algorithm.

Kadtke teaches the learning component is configured to identify an algorithm for each of said classification tasks and at least one sub-algorithmic routine for said algorithm (**Kadtke**, C7:66 through C8:5; EN the learning component of applicant is equivalent to 'neural nets' of Kadtke. A neural network can take in data from and algorithm and generate the correct sub-algorithm to use for the next classification step. It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD and MM with teaches the system wherein said learning component is configured to identify an algorithm for each of said classification tasks and at least one sub-algorithmic routine for said algorithm by Kadtke. Using a neural net for this has the advantages of learning and dynamically changing which sub-algorithm to choose from given the inputted data.

Claim Rejections - 35 USC § 103

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of MD, and MM, as set forth above, and further in view of Melen (U. S. Patent 5719960, referred to as **Melen**).

Claim 6.

MD and MM do not teach a media input/output module for administering data associated with classifying said non-textual subject data by reading and writing said data among a plurality of modules.

Melen teaches a media input/output module for administering data associated with classifying said non-textual subject data by reading and writing said data among a plurality of modules (**Melen**, C7:15-18). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD and MM with the system further comprising a media input/output module for administering data associated with classifying said non-textual subject data by reading and writing said data among a plurality of modules by Melen. This allows for faster and more secure data input.

Claim Rejections - 35 USC § 103

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of MD, and MM, as set forth above, and further in view of Wagner (U. S. Patent 5950180, referred to as **Wagner**).

Claim 8.

MD and MM do not teach the data capturing device configured to capture said content-based data and record said meta-data, said content-based data corresponding

to content information of a file of said subject data and said meta-data corresponding to situational environmental data of said data capturing device during a capture of said subject data.

Wagner teaches the data capturing device configured to capture said content-based data and record said meta-data, said content-based data corresponding to content information of a file of said subject data and said meta-data corresponding to situational environmental data of said data capturing device during a capture of said subject data (**Wagner**, C4:10-12). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD and MM with the system of claim 1 further comprising a data capturing device configured to capture said content-based data and record said meta-data, said content-based data corresponding to content information of a file of said subject data and said meta-data corresponding to situational environmental data of said data capturing device during a capture of said subject data by Wagner. This permits input to come from the real world thus having the ability to work in today's situation.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9, 10, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable in view of Namjunath & Deng and further in view of Wagner and further in view of Kadtke. ('Issues for Image/Video Digital Libraries', referred to as **MD**; U. S. Patent 5950180, referred to as **Wagner**; U. S. Patent 6278961, referred to as **Kadtke)**

Claim 9.

MD teaches establishing a sequential progression of decision making, including using automated processing techniques to define a dependent arrangement of a plurality of task nodes, each said task node in said dependent arrangement being associated with a class label for classifying a data file (**MD**, 595, C2:9-14; EN Segmentation is the first step of an established progression of decision making. Region based search techniques are the next step with this design. Region based is dependent of segmentation and they are within their own separate classes of algorithms), at least some of said task nodes including algorithms for determining which alternative next task node is to be selected in said sequential progression of decision making, said task nodes including multi-algorithmic task nodes having a plurality of alternative said algorithms for implementing said determination, each said multi-algorithmic task node being specific to determining assignment of a particular said class label for

availability in matching a query during a subsequent search and each said alternative algorithm at said multi-algorithmic task node being specific to said particular class label;(**MD**, p595, C2:29 through p596, C1:10; EN 'Class labels' of applicant is equivalent to 'codeword' and corresponding 'icon representation' of MD. MD, p595, C2:15-20; EN As stated above, the region based search follows a sequential pattern for decision in classification. In region based search there are a number of areas which the method can choose from. Texture, color, location are but a few multi-algorithms not within the same class which the task node can pick from.)

MD does not teach receiving a file of non-textual subject data,

Wagner teaches receiving a file of non-textual subject data (**Wagner**, C4:10-12). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD with receiving a file of non-textual subject data by Wagner. Using a CCD camera is a standard method for an image capturing device.

MD and Wagner do not teach progressing said file through said dependent arrangement defined in said establishing said sequential progression of decision making.

Kadtke teaches progressing said file through said dependent arrangement defined in said establishing said sequential progression of decision making (**Kadtke**, Figure 2; EN This shows a flow chart that is sequential and containing dependent arranged modules). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual

subject data of MD and Wagner with progressing said file through said dependent arrangement defined in said establishing said sequential progression of decision making by Kadtke. By using a standard consistence approach, this allows for modifications to be made with little effect on other modules.

MD and Wagner do not teach selecting from among said alternative algorithms at said multi-algorithmic task nodes.

Kadtke teaches selecting from among said alternative algorithms at said multi-algorithmic task nodes (**Kadtke**, Figure 1). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD and Wagner with selecting from among said alternative algorithms at said multi-algorithmic task nodes by Kadtke. This allows for a simpler design when constructing the decision making process.

MD and Wagner do not teach utilizing an algorithmic component to perform said selection, said selection at least partially based on prior determinations at previously encountered task nodes in said sequential progression.

Kadtke teaches utilizing an algorithmic component to perform said selection, said selection at least partially based on prior determinations at previously encountered task nodes in said sequential progression (**Kadtke**, C9:25-29). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD and Wagner with utilizing an algorithmic component to perform said selection, said selection at least partially based on prior determinations at previously encountered task nodes in said sequential

progression by Kadtke. By using previous encountered task nodes and statically methods, the performance of the method can be improved upon.

Claim 10.

MD teaches a learning procedure in which content-based data is extracted from each of a plurality of training images and meta-data is identified for each said training image (**MD**, p596, C2:34-35).

Claim 11.

MD does not teach the step of generating a plurality of learning classes that are descriptive of said training Images, including using an association pattern technique of recognizing and using patterns In assignments of said class labels, said step of generating including applying content-based analysis for said content-based data and meta-data analysis for said meta-data.

Wagner teaches a step of generating a plurality of learning classes that are descriptive of said training Images, including using an association pattern technique of recognizing and using patterns In assignments of said class labels, said step of generating including applying content-based analysis for said content-based data and meta-data analysis for said meta-data (**Wagner**, C5:36-39). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD with generating a plurality of learning classes that are descriptive of said training Images, including using an

association pattern technique of recognizing and using patterns In assignments of said class labels, said step of generating including applying content-based analysis for said content-based data and meta-data analysis for said meta-data by Wagner. EN By using a neural network, associating patterns and recognizing said patterns is easily accomplished.

Claim 12.

MD does not teach the step of dynamically modifying said sequential progression of decision making, including monitoring said determinations at each of said decision nodes and adjusting for detected patterns in said determinations.

Wagner teaches the step of dynamically modifying said sequential progression of decision making, including monitoring said determinations at each of said decision nodes and adjusting for detected patterns in said determinations (**Wagner**, Figure 4; EN By using a neural network, dynamically modifying the decision making progress is already there in the design.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD with a step of dynamically modifying said sequential progression of decision making, including monitoring said determinations at each of said decision nodes and adjusting for detected patterns in said determinations by Wagner. Having the ability to dynamically alter the decision making progress, will have the effect of a more efficient machine and the ability to change with the current environment.

Claim Rejections - 35 USC § 103

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of MD, Wagner and Kadtde, as set forth above, and further in view of Shu (U. S. Patent 4901360, referred to as **Shu**).

Claim 13.

MD, Wagner and Kadtke do not teach a step of assigning a semantic description to said file of non-textual subject data for one of organizing said file and matching a query during a search for said file.

Shu teaches a step of assigning a semantic description to said file of non-textual subject data for one of organizing said file and matching a query during a search for said file (**Shu**, C14:1-4). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention of a system for classifying files of non-textual subject data of MD, Wagner and Kadtke with a step of assigning a semantic description to said file of non-textual subject data for one of organizing said file and matching a query during a search for said file by Shu. This will act as another link between the user and the file for organizing purposes.

Response to Arguments

10. Applicant's arguments filed on Feburary 14,2006 for claims 1-13 have been fully considered but are not persuasive.

11. Applicant amended the claims to overcome the 35 U. S. C. §101 objection. Examiner withdraws the §101 objection.

12. In reference to the Applicant's argument:

In response to the rejection of the claims, independent claims 1 and 9 have been amended to more clearly distinguish the claimed invention from the cited prior art. As amended, claim 1 describes the system decision module as including a task component configured to perform classification tasks, wherein an established sequential progression of decision making includes classification nodes for assigning class labels to an individual image file such that the class labels are available for matching a query when a search for the individual image file is subsequently conducted. The amendment to claim 1 provides clarity with regard to the invention being used to assign the class labels. That is, the components described in claim 1 are cooperative with regard to assignment of the class labels, which can then be used subsequently in conducting a search. Support for the amendment to claim 1 may be found on page 3, lines 14-16 of the application as originally filed. The application states that the class labels that are selected as descriptors of a particular image are utilized for organization and "for matching a query when a search for the image is subsequently conducted."

Examiner's response:

MD p595 C2:29 through p596 C1:10 describes a visual thesaurus in which features are computed. These features are clustered into groups of a particular feature. These groups are related to a codeword, which has it's own visual icon. 'Labels that are available for matching a query' of applicant is equivalent to 'visual icons' of MD. First Office Action applies.

13. In reference to the Applicant's argument:

The amendment to claim 9 is similar to that of independent claim 1. The computer implemented method is now described as including using automated processing techniques to define a dependent arrangement of task nodes that Include multi-algorithmic task nodes. Each multi-algorithmic task node is specific to determining assignment of a particular class label for availability jn matching query in a subsequent search. Support for the amendment to claim 9 is the same as the support for the amendment to claim 1.

Examiner's response:

MD p596 C2:37 through p597 C1:3 describes a user interface. The user can select color, object texture. These query options represent searching algorithms that exists in MD. 'Multi-class algorithmic node' of applicant is equivalent to 'query interface' of MD. First Office Action applies.

14. In reference to the Applicant's argument:

By amending claims 1 and 9 to describe the elements of the invention as being cooperative in assigning class labels, the invention is distinguished from components and method steps that are Implemented to take advantage of class labels which have been previously assigned. In the determination of patentability of the claims prior to amendment, the teachings of the prior art with regard to assigning °class labels" were merged with the teachings of the prior art with regard to use of the class labels which were previously assigned. For example, in the rejection of claim 1, it is agreed that MD does not teach meta-data analysis for processing meta-data, but it is then noted that the secondary reference to MM teaches the use of meta-data on page 841, column 1, lines 18-20. However, the meta-data described in this portion of MM is specific to the "class labels" themselves (i.e., the texture features) that have been extracted from the original image. Claim I describes the use of meta-data as being a means to achieve a result, whereas the meta-data of MM is the final result in the assignment of class labels. Similarly, the teachings of the primary reference to MD with respect to "post-label assignment" queries are cited in the rejection of the claims. For example, it is noted in an Examiner's Note (EN) that column 2, lines 41-43 on page 595 of MD teach that a query pattern request will be used to find a match.
Applicants respectfully request reconsideration of the claims in view of the amendments to the claims.

Examiner's response:

If applicant saw the use of 'meta-data' as an analysis tool, then MD provides an example of this. MD p596 C2:37 through p597 C1:3 describes using an interface with icons that represent meta-data for queries. First Office Action applies.

15. In reference to the Applicant's argument:

As previously noted, one difference between the amended claim and the teachings of the primary reference to MD is that claim I describes the class labels that are to be assigned as being available for matching a query .when a search for the individual image file is subsequently conducted. The query pattern request identified in the Office action occurs after an image in a database has been assigned its proper class labels. Moreover, the cited portions of column 2 on page 595 of MD do not teach a sequential progression in which at least some of the classification nodes include algorithms for determining which of a plurality of alternative next classification nodes is to be encountered within the sequential progression of decision making. The search for a match between assigned codewords is distinguishable from the decision making regarding whether the assignment of the class labels is to be made.

With regard to component (b) in claim 1 (i.e., the algorithmic component), there is citation to the paragraph of.the primary reference to MD that begins on page 595 and ends on page 596. This paragraph merely states that the long term goal is to construct a visual thesaurus for images/video, where the codewords of the thesaurus are created at various levels of visual hierarchy by grouping primitives such as texture, color, shape and motion. Applicants respectfully assert that this does not teach or suggest the algorithmic component that is common to the classification nodes and that is accessed by each classification node for selecting a specific algorithm for each of the classification tasks. The primary reference describes examples of the codewords for texture as being "parking lots," "airport tarmacs," "building developments," "vegetation patterns," and "highways." Fig. 1 In MD is an example of a region-based retrieval of parking lot areas in aerial photographs. The different codewords are the results of the application of algorithms, rather than being algorithms themselves.

Examiner's response:

MD p596 C1:11 to C2:14 uses a neural network along with a vector quantization scheme to develop an hierarchical indexing which is equivalent to determining the next classification node of applicant. If there exists an hierarchical structure then there is a determination point in which the next classification point would follow. 'Algorithmic component' of applicant is equivalent to 'neural network' of MD. First Office Action applies.

16. In reference to the Applicant's argument:

The Office action notes that MD does not teach meta-data analysis for processing meta-data. Therefore, the secondary reference to MM was cited. However, the reference to meta-data in column 1 on page 541 Is the stored results of the process, rather than the use of meta-data to achieve this result for storage.

Examiner's response:

MD teaches the use of an interface using icons that represent meta-data. This illustrates the use of meta-data to achieve results. First Office Action applies.

17. In reference to the Applicant's argument:

Also in component (b) of claim I is the description of at least some of the classification nodes in the sequential progression of decision making being configured to select among alternative stored algorithms that are specific to determining assignment of a same class label. The Office action asserts that this is taught by MD, since the primary reference refers to identification of color, shape, texture and location. Applicants respectfully point out that the alternative stored algorithms of claim 1 are specific to determining assignment of a game class label. Therefore, teachings regarding different class labels (e.g., color, shape and texture) do not read on claim 1. Additionally, the

alternative algorithms of claim 1 relate to a particular classification node, whereas a person of ordinary skill In the art would consider classification nodes relating to color, shape and texture as being different classification nodes.

Component (b) of claim 1 identifies selection from alternative stored algorithms that are specific to determining assignment of a same class label, with prior determinations at classification nodes being used as the basis for selecting among the alternative algorithms specific to determining assignment of "said same class label." Then, in component (c) (i.e., the sub-algorithmic component), at least one sub-algorithmic routine is selected based on the selecting of the algorithm. With respect to component (c), the Office action cites column 2, lines 5-16 on page 597 of the primary reference to MD. This portion of the reference refers to the extension of the idea to videos. Within the given number of frames of a video, one frame is chosen for spatial segmentation. The regions obtained as a result of this segmentation are the ones that are tracked over the entire group of frames. Fig. 4 of MD is an example of region tracking over several groups of frames. Each video shot is thus composed of a set of subobjects and the video shot can be characterized by Its subobject information and the spatial and temporal relation between these subobjects. The representation allows a user to track regions in a video sequence and search for regions with similar color, texture, shape, motion pattern, location, or size. It is respectfully asserted that this neither teaches nor suggests the selection of sub-algorithmic routines for a specific algorithm selected from among alternative stored algorithms that are specific to deter-mining assignment of a same class label,. The composition of a set of subobjects from a video shot does not assign a class label.

Examiner's response:

MD illustrates determining differences within the same class (MD p596 C1:11 through C2:14) Under texture, MD shows examples of parking lots, airport tarmacs, building development, vegetation. There exists different algorithms for such classifications and all are within the same class of 'texture' and parking lots, airport tarmacs, building development, vegetation are equivalent to subobjects. First Office Action applies.

18. In reference to the Applicant's argument:

With respect to the patentability of claim 9, the Office action notes that the primary reference to MD teaches segmentation as a first step of the process and teaches region-based search techniques as the next step. It is submitted in the Office action that these two steps of MD teach "establishing a sequential progression of decision making, including using automated processing techniques to define a dependent arrangement of a plurality of task nodes, each said task node in said dependent arrangement being associated with a class label for classifying a data file." Applicants respectfully point out that the segmentation is not associated with a class label for classifying a data file. This first step of MD merely defines segments. Claim 9 describes a sequential progression of decision making. Task nodes include multi-algorithmic task nodes having a plurality of alternative algorithms for implementing the determination. It is submitted in the Office action that texture, color and location are but a few multi-algorithms not within the same class from which the task node of MD can pick. However, Applicants respect-fully submit that a person of ordinary skill in the art would not interpret MD to teach a sequential progression of decision making in which the system decides to categorize based upon either texture, color or location. The reference does not appear to allow the system to select which features will be of interest. Instead, the sequential progression as taught by MD would be one in which the different types of features are considered in progression, if there is an established sequential progression as described in pending claim 9.

Examiner's response:

Incoming data files most likely will have more than one characteristic/class within them. The first step is to separate these classes and then classify them. Separating the incoming data file into its components is needed to fulfill a classification process. MD also illustrates classification with the same class as in texture. MD teaches a hierarchical image thesaurus which is equivalent to 'sequential progressive of decision making' of applicant. (MD p596 C1:11 through C2:14) First Office Action applies.

19. In reference to the Applicant's argument:

The Office action notes that neither the primary reference to MD nor the secondary reference to MM teaches progressing a file through a dependent arrangement defined in said establishing said sequential progression of decision making. Therefore, Kadtke

was cited. However, the fixed arrangement of Kadtke does not teach or suggest modifying the primary reference to MD such that at least some of the task nodes include algorithms for determining which alternative next task node is to be selected in the sequential progression of decision making.

Kadtke was also cited for teaching selecting from alternative algorithms at multi-algorithmic task nodes. It is asserted that it would be obvious to modify MD so as to include the multi-algorithmic task nodes taught by Kadtke, since this allows a simpler design when constructing the decision making process. However, applicants assert that modifying MD to include the teachings of Kadtke would greatly increase the complexity. As noted with regard to the patentability of claim 1, the first stated object of Kadtke is to provide a "theoretically well-founded method of signal processing and time series analysis which can be used in a variety of applications (such as Sonar, Radar, Lidar, seismic, acoustic, electromagnetic and optic data analysis) where deterministic signals are desired to be detected and classified." Thus, as noted in the ABSTRACT of Kadtke, the techniques use dynamic filters and classifiers optimized for a particular category of signals of interest. This capability and complexity is not advantageous to the system and method taught in MD.

Examiner's response:

MD p596 C1:11 through C2:14, teaches a hierarchical algorithm to which illustrates

decision points of classification. First Office Action applies.

Examination Considerations

20. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, l 45-48; p 2100-9, c 1, l 1-4). The

Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

21. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

22. Examiner's Opinion: Paragraphs 21 and 20 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24. Claims 1-13 are rejected.

Correspondence Information

25. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.)

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Peter Coughlan

4/14/2006

P. E.